



Solae, LLC
P.O. Box 88940
St. Louis, MO 63188
800/325-7108

February 11, 2005

Mr. Arthur L. Williams, Director
Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, KY 40204

RE: Formal Comments on Louisville Strategic Toxic Air Reduction Program (STAR) Program

Dear Mr. Williams:

Solae, LLC is committed to environmental stewardship. Our goal and our expectation from every one of our operating facilities is that they will not release any materials to the environment which are not authorized by applicable permits. It is also expected that each of our facilities continually reduce the environmental footprint at each site by using less energy and water and generating less waste and emissions and continually striving to find inherently safer processes. Our Louisville plant has exemplified this commitment. In the past 5 years, the plant has replaced many chemicals with safer, more environmentally friendly alternatives.

We are concerned, however, about the Louisville STAR program as it is currently evolving for the following reasons. First, we feel that the new regulations have been developed over a very short timeline that has limited the opportunity for rigorous stakeholder discussion and debate.

Second, we feel that additional analysis of the risks to the community from current emissions versus the benefits from additional regulations is warranted. Third, as presently defined, compliance with the program will add a significant cost and manpower burden which will impact not only Solae's competitive position but also all businesses in Louisville that are affected by the regulation. The burden also appears to fall disproportionately on industry while impacts from other sources (mobile, neighboring state emissions) are not being addressed.

In summary, before final regulations are issued, we would encourage the Air Board to carefully consider the comments received on this issue, re-examine the risks/benefits and the science on which those risks/benefits are based, and critically challenge the regulatory framework and costs associated with the program. Stakeholder involvement during this analysis is critical if a truly effective and fair set of regulations is to emerge.

Mr. Arthur L. Williams
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We appreciate the opportunity to comment.

Sincerely,

Carl W. Eklund , PE, DEE
Director, Environmental Engineering
SOLAE, LLC
314-982-4894

February 7, 2005

Author L. Williams, Director
Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, KY 40204

RE: STAR Program Formal Comments

Dear Mr. Williams:

One of Solae's core values is a commitment to safety, health, and the environment. In fact, the Louisville site has voluntarily spent over \$3.5 million over the last 5 years on environmental stewardship. Our site has improved dust collection systems and process equipment thereby reducing emissions. In addition, we have voluntarily eliminated several chemicals from our site that include sulfur dioxide, zinc hydrosulfite, ammonium thioglycolate, ammonia acrylamide, sodium bisulfite and chlorine gas.

Stringent local regulations that exceed Federal or State mandates deter economic development. Solae is concerned with the additional annual cost to local business that will result from the STAR program as presently conceived. Increased cost and regulatory requirements reduce a company's competitive position in a tight market. In addition, future expansion and growth opportunities are evaluated based on numerous factors including the local regulatory environment.

An effective regulation addresses the goals of improved air quality and protection of public health while continuing to foster economic growth. Effective regulations are best developed by a cooperative approach using an on-going stakeholder process that includes citizens, government, industry, academia and others.

Solae request that the Air Board not approve the STAR Program as currently written. In addition, we would like to see the Air Board promote and support a true stakeholder process to develop any regulatory requirement that affects the community. This process would lead to an effective regulation that is well thought out, and based on true risks, benefits, and costs.

Sincerely,

Rusty Napier
Plant Manager

February 11, 2005

Arthur L. Williams, Director
Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, KY 40204

RE: STAR Program Formal Comments

Dear Mr. Williams:

The commitment to safety, health, and the environment is a core value of Solae. Our site has voluntarily spent over \$3.5 million over the last 5 years on environmental stewardship. We have improved dust collection systems, replaced equipment, and have voluntarily eliminated several chemicals from our process.

Please accept the following comments on the proposed STAR Program.

Additions to Program

Several informal comments noted that companies are waiting on construction permits, some over 12 months, to install new pollution control equipment that would reduce air emissions. The new requirements of the STAR program will only increase this delay.

- To expedite the permit approval process, we request that the STAR Program be expanded to include a requirement that the LMAPCD must respond to industry requests for construction permits relating to pollution control devices within 60 days of submittals.

Regulatory Impact Assessment (RIA)

Justification for STAR

The EPA states that the, "The national-scale assessment was not designed to characterize risks sufficiently for regulatory action."

- What is the justification for the LMAPCD to use this information to establish regulatory action when the EPA does not intend for the screening analysis to be used this way?

Economic Impact

Solae is currently well below all Local, State and Federal emission standards. However, approval of the STAR program will require the site to hire a consultant to evaluate our current process. It is estimated that the STAR program could cost the Louisville site in excess of \$32,000 initially and more that \$20,000 annually to comply with the proposed program. The cost will increase if new equipment is needed for compliance (*see Solae's STAR Program Formal Comments – Cost of Compliance Moderate Sources*). This did not seem to be addressed in the RIA.

- What is the justification for the increased cost burden on moderate sources when they are currently in regulatory compliance?

We do not feel that the RIA addressed the informal comment that was made by Solae concerning the additional cost to residents of Jefferson County. The RIA stated that the District has not attempted to develop the cost savings to the public resulting from the reduction in TAC emissions from establishing the STAR Program. However, we believe that there will be a negative cost impact to the residents of Jefferson County.

The STAR program will lead to an increase in operating expenses for companies in Jefferson County. The increased cost will include consultant fees for program development, modeling, auditing, equipment purchases, enhanced Leak Detection and Repair (LDAR), report submittal, permit fees, and internal resources.

There are 43 Major sources affected by the STAR program that include six LG&E facilities, the Veterans Administration Medical Center, Ford Motor Company, GE and the University of Louisville. In addition, 130 Minor sources include Baptist East Hospital, Caritas Hospital, Kindred Hospital, Courier-Journal, Jefferson County Schools, Nicolas Garage, and the U.S. Army Corps of Engineers are affected by the proposal.

Hospitals will pass this additional cost to the public in the form of higher healthcare cost. Jefferson County schools and the Corp of Engineers could pass this on to the residents in the form of increased taxes or decreased services. Ford, General Electric and other manufacturing facilities could pass this on in the form of increased consumer product cost.

LG&E has and will pass additional cost for pollution control equipment on the public and industry in the form of higher electricity rates. This is shown by the *Environmental Surcharge* line item on your monthly bill. Last months LG&E residential bill included a letter where they are “seeking permission from the Kentucky Public Service Commission to pass along the cost to our retail customers through the existing Environmental Surcharge billing factor.” The increase is to cover the cost of a series of facility

improvements that includes scrubbers and NO_x removal equipment. Other future projects include new pollution control equipment with an estimated cost of \$40.2 million. According to the letter, the residential customer impact is estimated to be \$0.14 per 1,000 kilowatt hour in 2005 with the maximum increase expected to be \$0.32 in 2008. Solae paid an Environmental Surcharge of \$710 in January 2005.

If the STAR program is adopted as written, annual operating expenses will increase. Companies will pass this additional cost onto their customers. As a result, the cost of the STAR program will be passed onto the residents and other consumers.

- We request that the LMAPCD revise the RIA to include the increased public and consumer cost of the STAR program due to increased company operating expenses that will be required in order to comply with the proposed STAR program?

Industrial Expansion

Stringent local regulations that exceed Federal or State mandates deter local economic development. Major employers such as Ford and General Electric will expand elsewhere due to the high additional capital equipment cost of compliance. If approved, the STAR program will be an obstacle to economic growth and development in Louisville.

Reduction Goals and Risk

EPA uses a risk range of 1×10^4 to 1×10^6 and considers population risk and economic factors. In the response to Informal Comments, the LMAPCD disagrees that there should be a risk range that spans two orders of magnitude. In addition, the LMAPCD stated it does not consider the EPA allowed risk policy to be sufficiently protective of public health.

- What evidence does the LMAPCD have to justify that the EPA's risk policy is not sufficient to protect public health?

The LMAPCD stated in the RIA that the Clean Air Act requires a reduction in the incidence of cancer attributed to the air emissions by not less than 75% and a significant reduction in the risk to the public of other serious adverse health effects caused by airborne toxins. We feel that the LMAPCD did not adequately address our informal comment in either their response to informal comments or the RIA. Monitoring data shows that the chemicals were detected. However, the LMAPCD has not provided any supporting evidence that these chemicals have directly resulted in any adverse health effects to the community.

- Excluding the WLATS monitoring data and the *EPA Air Toxics Relative Risk Screening Analysis*, what data does the APCD have to justify that there is a true public health risk to the community as a result of emissions from major sources in Jefferson County?

- What are the total current incidence rates of cancer attributed to air emissions in Jefferson County (*please include sources of data and types of cancer in all responses*)?
- What are the current incidence rates of cancer attributed to air emissions from major sources within Jefferson County?
- What are the current incident rates attributed to air emission from area and mobile sources within Jefferson County?
- How was the LMAPCD able to differentiate the types of cancer and cancer rates cause by emissions form major, mobile and area sources within Jefferson County?
- What are the current incidence rates of cancers in Jefferson County attributed to air emissions from sources outside of Jefferson County?
- What is the estimate for the number and types of cancers that will be prevented by reducing major source emissions by the STAR program?

- What does the LMAPCD consider as other serious adverse health effects of emissions?
- What are the current rates of other serious adverse health effects that are caused by major source emissions in Jefferson County to the residents of Jefferson County?
- How was the LMAPCD able to differentiate the adverse health effects caused by major source emissions and the emissions from mobile and other sources?
- How will the LMAPCD be able to differentiate the risk to the public of other serous adverse health effects caused by airborne toxics emitted outside of Jefferson County?
- What will the LMAPCD consider a significant reduction in the risk to the public of other serous adverse health effects caused by airborne toxics emitted in Jefferson County?
- How will the LMAPCD quantify the risk information, collect future data, analyzed this data and publish progress?

- How will the LMAPCD be able to demonstrate to the community the effectiveness of the STAR Program?

Risk Management Plan

It appears as if the LMAPCD did not follow the guidelines of the West Louisville Air Toxics Study Risk Management Plan, “Process and Framework”, in developing the STAR program.

- What is LMAPCD’s justification for not following established procedures, specifically, a stakeholder involvement process that would have included and assessment of options to address the risks of identified emissions?

Sources of Emissions – Mobile Source Air Toxins

Motor vehicles emit several pollutants that EPA classifies as known or probable human carcinogens. Benzene, for instance, is a known human carcinogen, while formaldehyde, acetaldehyde, 1,3-butadiene and diesel particulate matter are probable human carcinogens. Of the 21 Mobile Source Air Toxins (MATs) on the EPA list, six are listed as Category 1 Toxic Air Contaminants (TAC), five are listed as Category 2 TACs, four are listed as Category 3 TACs and three are listed as Category 4. The two other mobile source air toxins not listed in the STAR program are diesel particulate matter and dioxin.

Nineteen (19) of the chemicals listed as Toxic Air Contaminants in the STAR program are also listed as EPA's mobile source air toxins (MATs) and the EPA estimates that MATs account for as much as half of all cancers attributed to outdoor sources of air toxins.

- Since the EPA estimates that MATs account for as much as half of all cancers attributed to outdoor sources of air toxins, what is the justification for the LMAPCD waiting as long as December 31, 2012 to achieve the identified risk goals and standards from the proposed Plan of Action mentioned in Regulation 5.30?
- How was the LMAPCD able to quantify MAT emissions and the affect it had on the monitoring results of the West Louisville Air Toxics Study?
- If the LMAPCD was able to do this, what were the results?
- How will the LMAPCD account for the affect on MATs in the future to emissions and adjust the standards established by the STAR program to account for this?

Regulation 1.21

Section 12 Audit Requirements

We feel that this requirement is unjustifiable and an unreasonable request on industry. The requirement for a third party audit is above and beyond any Federal or State EPA requirement and is not required to prove compliance with any other air or discharge permits. In addition, this will not improve air quality or reduce emissions. Owner or operators do not need to conduct a third party audit to ensure compliance with the program no more than they need to conduct third party OSHA audits to prove compliance.

The cost associated with the conduct of a third party audit will be much higher than the range stated in the Regulatory Impact Assessment. We agree that the cost of hiring a third party auditor will be close to \$20,000. However, the internal cost is difficult to estimate since the number of employees involved and the duration of their involvement during the audit will vary. The actual cost estimated the internal would exceed the \$20,000 cost of the external auditor for a total cost in excess of \$40,000.

- Would it not be better for a company to spend \$40,000 on pollution control equipment than on an audit?

- If the LMAPCD insists that third party audits are required, we request that the LMAPCD conduct these audits because of their knowledge of the regulation.

Cancer Risk

Sources for following discussion:

1. *Courier Journal “Study finds huge cluster of lung cancer in Jefferson U of L expert attributes most of the cases to tobacco smoke” on Sunday, September 07, 2003.*
2. *Harvard Center for Cancer Prevention, Harvard School of Public Health, “Reports on Cancer Prevention”*
(<http://www.hsph.harvard.edu/cancer/publications/reports.html>)
3. *EPA Environmental Fact Sheet, “Air Toxics from Motor Vehicles”*
4. *EPA publication,” Taking Toxins out of the Air”*

Actual data indicates that Louisville residents do not have an increased cancer risk. According to Dr. Aldrich in the Courier Journal newspaper article, the overall rate of pediatric cancers — often a signal of potential environmental pollution — was below the national average. In the article, Dr. Aldrich said he found that it's likely the public doesn't have to worry about the environment as a cause of three categories of cancer sometimes associated with chemical pollutants: pediatric cancers, brain cancer and liver cancers. In all three, he said he found no evidence of excessive rates or clustering. In addition, the newspaper reported that Dr. Aldrich's stated that any cancer risks from the environment are broadly distributed throughout the county and are not likely attributed to any single industrial facility, group of facilities, such as Rubbertown chemical plants, or single source of pollution. Dr. Aldrich also presented similar information to the Air Board.

The National Cancer Institute projects lifetime risk of men getting cancer at 45.2 percent and 38.7 percent for women. Cancer has become more common as people live longer.

According to *The Harvard Reports on Cancer Prevention*, cancer is a preventable illness. The report states that nearly 2/3 of all cancer deaths in the US can be linked to tobacco use (30%), adult diet/obesity (30%), and lack of exercise (5%). Other risk factors include occupational factors (5%), family history (5%), viruses (5%), perinatal factors (5%), reproductive factors (3%), alcohol (3%), socioeconomic status (3%), environmental pollution – all sources (2%), ionizing radiation (2%), prescription drugs (1%) and salt/food additives (1%). The report included all sources of environmental pollution, not just air. Reviewing this information, a person has a 2.5 times greater risk of developing cancer due to family history than environmental pollution. One also has the same chance in developing cancer from the combined effects of prescription drug and food additives.

The Harvard reports also states that “few causal links have been firmly established between environmental pollution and cancer.”

- Based on this information, the Cancer Prevention Reports, information presented by Dr. Aldrich, and the EPA, how has the LMAPCD’s been able to establish a firm link between monitoring results and the incidence of cancer due to major source emissions in Jefferson County justifying the STAR program?

Summary

Solae agrees with the comments submitted by the Greater Louisville Inc. and Associated Industries of Kentucky (AIK) on the proposed STAR Program. Solae does not agree that there has been sufficient justification by the Louisville Metro Air Pollution Control District to support this regulation as written.

As a result, we request that the Air Board not approve the STAR Program as currently written. We would like to see the LMAPCD establish a stakeholder process like the one described in the West Louisville Air Toxics Study Risk Management Plan, “Process and Framework” when developing the STAR program.

In addition, we would like the LMAPCD to produce scientific data showing a firm link between monitoring results, risk assessments and the incidence of cancer (including number and types) in Jefferson County that are attributed to air emissions from major sources located within the County. We would also like the LMAPCD develop a system metrics with clear quantifiable baseline information and clear and quantifiable goals that would be tracked to show the true effectiveness and benefits of any regulation that is developed.

Sincerely,

Michael A. Ray, CSP
Safety, Health and Environmental Manager
Solae, LLC, d.b.a. DuPont Soy Polymers

February 11, 2005

Author L. Williams, Director
Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, KY 40204

RE: STAR Program Formal Comments - Cost of Compliance Moderate Sources

Dear Mr. Williams:

Solae, LLC has developed an estimate for the cost of compliance with the proposed STAR Program with the assistance of a local consulting firm. Solae is listed as a Moderate source operating under a Federally Enforceable District Origin Operating Permit (FEDOOP). The company does not maintain in house modeling expertise. This service would have to be contracted out. Actual cost will vary depending on modeling results and whether or not the Air Pollution Control District (APCD) would require us to implement a LDAR program. A discussion of the associated cost of compliance follows.

MODELING AND CAPITAL EQUIPMENT

Our preliminary assessment indicates that Solae would be required to model the fugitive and stack emission of a single Toxic Air Contaminant (TAC). If we were able to demonstrate compliance after running the Tier 3 model, our cost could be approximately \$1,000. If modeling results do not meet Environmentally Acceptable Levels, Tier 4 modeling will be required. The estimated cost for this modeling would be an additional \$7,000. If the limit can not be met after running both Tier 3 & 4 models, the site will then be required to develop a compliance plan. Development of a Compliance Plan could be an additional \$ 4,000. The costs of plan implementation and equipment to comply with the regulation can not be determined until all the modeling has been completed.

LEAK DETECTION

The regulations are not clear as to whether or not the APCD will require Solae to develop an Inorganic Compound Leak Detection and Repair (LDAR) program. The consulting company estimated the annual potential cost for this program could be \$20,000. We would like a definite determination from the APCD as to whether or not Solae would be required to develop this program. This would be an additional annual expense.

SITE RESOURCES AND FEES

It is estimated that site increased annual manpower requirements will be 162 hours. Final resource requirements would be dependent on modeling results and LDAR requirements. Our company has already invested more than 160 man-hours in the review of the proposed program and the development of comments. In addition, there will be an additional annual program fee of \$335. This is an 18% increase over the current annual fees of \$1,890.

SUMMARY

The APDC has listed 130 sites as moderate sources. An estimated total cost for local industries that are moderate sources are shown in the table below. The total estimate is based the assumption that companies will conduct a similar analysis, have a single TAC to model, that they will be required to develop a LDAR program.

| Additional Expense Item | Solae's Estimated Cost | Estimated Moderate Source Cost of Compliance |
|--------------------------------|-------------------------------|---|
| Consulting Fees - Initial | \$12,000 | \$1,560,000 |
| LDAR – Annual | \$20,000 | \$2,600,000 |
| Permit Fees – Annual | \$335 | \$ 43,550 |
| Equipment cost | Unknown | Unknown |
| Manpower Requirements – Annual | 162 man-hours | 21,060 man-hours |

There will be a negative economic impact to Solae and local industry if the STAR program is implemented. Stringent local regulations that exceed Federal or State mandates deter economic development. Actual compliance cost can not be determined until the final regulation is adopted, modeling has been completed and the applicability of LDAR has been determined. Additionally, the cost of compliance for major sources will be greater than for a moderate source. We request that the STAR program not be adopted as written and that it be modified to reduce the financial burden to industry.

Sincerely,

Michael A. Ray
Safety, Health and Environmental Manager
Solae, LLC, d.b.a. DuPont Soy Polymers